FREQUENCY MANAGEMENT GROUP

IRIG STANDARD 703-94

STANDARD ELECTRONIC ATTACK CLEARANCE REQUEST FOR RANGES

WHITE SANDS MISSILE RANGE
KWAJALEIN MISSILE RANGE
YUMA PROVING GROUND
DUGWAY PROVING GROUND
ELECTRONIC PROVING GROUND
COMBAT SYSTEMS TEST ACTIVITY

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NAVAL AIR WARFARE CENTER WEAPONS DIVISION
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STANDARD ELECTRONIC ATTACK
CLEARANCE REQUEST FOR RANGES

1.0 General. The procedures for coordinating and obtaining authorization for Electronic Attack (EA) (formerly termed Electronic Countermeasures (ECM)) training and testing activity have been developed in formal agreements between Department of Defense (DOD) and concerned federal agencies, primarily the Federal Communications Commission (FCC) and the Federal Aviation Administration (FAA). As a result, EA may be performed under the condition of **nonharmful interference.** Strict adherence to the agreed parameters is necessary to avoid incidents of electromagnetic interference to authorized spectrum users. These users have the right to operate in the RF spectrum free from interference, specifically **harmful interference.** In all EA operations, adequate points of contact, telephone numbers, call signs, and frequencies are necessary to quickly and effectively stop EA operations if harmful interference is reported to operations of activities having authorized frequency assignments.

1.1 Application. The directive for EA applies to all military and military contractor EA operations. It includes geographic areas of the United States, United Sates possessions, Canada, and open-ocean areas.

1.2 Mission Description. The following descriptions are used in proposing EA use:

1.2.1 EA Mission. Surface or inflight EA done by one or more jammers and aircraft working as a unit.

1.2.2 Inflight EA. All types of airborne electronic jamming, deception, or chaff dispensing.

1.2.3 Local Frequency Clearance. The clearance for EA in a specified geographical area, coordinated with local agencies concerned.

1.3 EA Frequency Bands. The spectrum is divided into specified bands from 0 Hz to 100 GHz with each band assigned a category of coordination requirement. These categories range from simple notification (**Unrestricted**, **Authorized Tactical** and **Local FCC**) to formal agreement on the national departmental level (**National**). Required lead times vary from days to months, depending on the level of coordination and approval required. A current list of EA frequencies along with categories of coordination and approval requirements can be found in appendix A.

1.4 EA Coordination. Most DOD test ranges already have conditional blanket EA clearances in place for much of the electromagnetic spectrum. Approval to conduct EA (electronic and chaff) in these approved bands can be coordinated through the local Military Department Frequency Management Office (FMO). This controlling agency will submit an **EA Frequency Clearance Approval Notification** message to the appropriate area agencies such as FAA, FCC, North American Air Defense (NORAD), or National Weather Service. Proposed EA in **National** bands that **do not** have the approved clearances yet require the FMO to submit an **EA Frequency Clearance Request** message to the national level for approval. Whatever the category, all EAs must be coordinated with the local FMO through the EA Frequency Coordination Request Memo. See appendix B for a copy of the memo.

1.5 Inflight Requirements. Aircraft and ground controllers must guard frequency 243 or 121.5 MHz and a communication channel during EA operations.

1.6 EA Nomenclature. A number of standard phrases used by aircraft and controllers during EA operations are described in the following subparagraphs.

1.6.1 Buzzer. Unclassified word for electronic noise jamming or deception.

1.6.2 Barrage Jamming. Simultaneous electronic jamming over a broad band of frequencies.

1.6.3 Spot Jamming. Jamming of a specific channel or frequency.

1.6.4 Sweep Jamming. A narrow band of jamming that is swept back and forth over a frequency band.

1.6.5 Cease Buzzer. Order to cease EA. Aircraft and ground controllers acknowledge all such requests.

1.6.6 Big Photo. Unclassified general call sign used to contact aircraft performing inflight EA.

1.6.7 Ground Photo. Unclassified general call sign for surface sites actively performing EA.

1.6.8 Chaff. Chaff dropped in STREAM (short intervals appearing on radar as a continuous line) and BURST (dropped at intervals such that it appears on radar as individual targets).

APPENDIX A

LIST OF ELECTRONIC ATTACK AND DEFINITIONS OF ELECTRONIC ATTACK TERMS

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LIST OF ELECTRONIC ATTACK AND DEFINITIONS OF ELECTRONIC ATTACK TERMS

This appendix contains a current list of electronic-attack frequency bands as well as the definitions of electronic-attack terms of conditions of use. Also included are the coordination and approval requirements.

EA FREQUENCY BANDS	
Frequency (MHz)	**Conditions of Use**
0 - 50	National
50 - 54	Unrestricted
54 - 73	Local FCC
73 - 75.4	National
75.4 - 108	Local FCC
108 - 138	National
138 - 162	Authorized Tactical
162 - 174	National
174 - 216	Local FCC
216 - 220	National
220 - 225	Unrestricted
225 - 242.5	Authorized Tactical
242.5 - 243.5	National
243.5 - 282.3	Authorized Tactical
282.3 - 283.3	National
283.3 - 328.6	Authorized Tactical
328.6 - 335.4	National
335.4 - 381.3	Authorized Tactical
381.3 - 382.3	National
382.3 - 400	Authorized Tactical
400 - 420	National
420 - 450	Unrestricted
450 - 475	National
475 - 500	Local FCC
500 - 512	National
512 - 608	Local FCC
608 - 614	National
614 - 806	Local FCC
806 - 902	National
902 - 928	Unrestricted
928 - 1429	National
1429 - 1435	Unrestricted
1435 - 2300	National
2300 - 2310	Unrestricted
2310 - 2390	National
2390 - 2450	Unrestricted
2450 - 3000	National
3000 - 3700	Unrestricted
3700 - 4400	National
4400 - 4990	Unrestricted
4990 - 5250	National

EA FREQUENCY BANDS	
Frequency (MHz)	**Conditions of Use**
5250 - 5600	Unrestricted
5600 - 5650	National
5650 - 5925	Unrestricted
5925 - 8500	National
8500 - 9000	Unrestricted
9000 - 9200	National
9200 - 10,550	Unrestricted
10,550 - 11,700	National
11,700 - 13,250	Local FCC
13,250 - 14,000	Unrestricted
14,000 - 17,700	National
17,700 - 19,300	Local FCC
19,300 - 19,400	National
19,400 - 19,700	Local FCC
19,700 - 22,000	Unrestricted
22,000 - 24,470	National
24,470 - 27,525	Unrestricted
27,525 - 31,300	Local FCC
31,300 - 31,800	National

Definitions of EA terms of "Conditions of Use"

UNRESTRICTED: Local FMO coordination is required.

AUTHORIZED TACTICAL: Specific frequencies within the band specified are currently assigned for tactical use and may be used for EA. Coordination is required by local FMO. A 3-day lead time is required.

LOCAL FCC: These frequencies are under the control of FCC licensing procedures but are available through coordination with FCC Field Engineers. In a few cases, this procedure is also used with bands where the FAA is the major band user. Coordination is required through the local FMO. A 7-working day lead time is required.

NATIONAL: National department level coordination is required. Typical coordination times can take months, and indepth analysis is often required unless previous similar systems have been coordinated and tested. The local FMO will assist in developing plans and in coordinating tactics. A minimum of 60 days advance lead time is required.

All information in this appendix was taken from *Performing Electronic Countermeasures in the United States and Canada*. AIR FORCE INSTRUCTION 10-701, AR 105-86, OPNAVINST 3430.9D, and MCO 3430.1B.

APPENDIX B

ELECTRONIC ATTACK FREQUENCY COORDINATION REQUEST MEMO

ELECTRONIC ATTACK FREQUENCY COORDINATION REQUEST MEMO

From: (Requesting Activity)
To: (Local FMO)

Subj: EA FREQUENCY COORDINATION REQUEST

Ref: (a) AIR FORCE INSTRUCTION 10-701 or AR 105-86 or OPNAVINST 3430.9D or MCO 3430.1B

Encl: (1) (As required)

1. The following Electronic Attack (EA) coordination requirements are forwarded in accordance with reference (a):

   a. **Requestor** (Point of contact, commercial/DSN telephone numbers):

   b. **EA Clearance Request Control Number** (This control number will consist of unit designation abbreviation, the calendar year number followed by a hyphen, and an Arabic number assigned consecutively.):

   c. **EA Operating Areas, Routes, Altitudes and Times of Operation**

      1) **Geographical Bounds** (Radius of center point, box using LAT/LONG. Specify airborne operation, ground fixed or mobile operation.):

      2) **Route of Flight** (Stop and start points):

      3) **Altitude** (AGL):

      4) **Topographical Layout** (Terrain such as overwater or in valley):

      5) **Expected Duration Per Activity** (In minutes):

   d. **Positive Control** (Notification/monitoring/controlling procedures):

   e. **Frequencies Requested** (Enter frequencies/bands in megahertz):

f. **EA Jamming Equipment**

1) **Nomenclature:**

2) **Spread Spectrum Emitters** (For example, SINGARS and HAVEQUICK):

3) **Power** (In watts):

4) **Bandwidth** (Minimum and maximum):

5) **Antenna Gain, Antenna Name** (For example, 20G and parabolic):

6) **Antenna Polarization** (For example, vertical, horizontal, and linear):

7) **Antenna Beam Width at Half Power Points:**

8) **Antenna Orientation** (For example, rotates through 360^0 and vertical scan):

9) **Pulse Duration** (For pulse emissions only):

10) **Pulse Repetition Rate** (For pulse emissions only):

g. **Operational/Training Scenario** (Provide a brief description):

h. **Type of Jamming** (For example, repeater, spot, sweep, and barrage):

i. **Stop Buzzer Point of Contact, Frequencies, Call Sign, and Phone Numbers** (If known):

j. **Security Classification Instructions** (Classify in accordance with DOD 5200.1R; enter statement indicating what item entries singularly or collectively make the request classified):

2. Our point of contact is (for planning purposes):